This listing of claims will replace all prior versions, and listings, of claims in the application:

#### **LISTING OF CLAIMS:**

#### 1. (Currently Amended) A compound of the formula

in which

 $R^1$  is  $C_1$ - $C_8$ -alkyl,  $C_2$ - $C_6$ -alkenyl,  $C_2$ - $C_6$ -alkynyl or  $C_3$ - $C_8$ -cycloalkyl, where  $C_1$ - $C_8$ -alkyl is optionally substituted by oxo, and

where  $C_1$ - $C_8$ -alkyl,  $C_2$ - $C_6$ -alkenyl,  $C_2$ - $C_6$ -alkynyl and  $C_3$ - $C_8$ -cycloalkyl are optionally substituted by up to 3 radicals independently of one another selected from the group of  $C_1$ - $C_6$ -alkyl,  $C_1$ - $C_6$ -alkoxy, hydroxycarbonyl, cyano, amino, nitro, hydroxy,  $C_1$ - $C_6$ -alkylamino, halogen, trifluoromethyl, trifluoromethoxy,  $C_6$ - $C_{10}$ -arylcarbonylamino,  $C_1$ - $C_6$ -alkylcarbonylamino,  $C_1$ - $C_6$ -alkylaminocarbonyl, heteroarylcarbonylamino,  $C_1$ - $C_6$ -alkylsulphonyl, heteroarylcarbonylamino,  $C_1$ - $C_6$ -alkylsulphonyl,  $C_1$ - $C_6$ -alkylthio,

where

 $C_1\text{-}C_6\text{-alkyl}, C_1\text{-}C_6\text{-alkoxy}, C_1\text{-}C_6\text{-alkylamino}, C_6\text{-}C_{10}\text{-arylcarbonylamino}, C_1\text{-}C_6\text{-alkylaminocarbonyl}, C_1\text{-}C_6\text{-alkoxycarbonyl}, \\ C_6\text{-}C_{10}\text{-arylaminocarbonyl}, \text{heteroarylaminocarbonyl}, \\ \text{heteroarylcarbonylamino}, C_1\text{-}C_6\text{-alkylsulphonylamino}, C_1\text{-}C_6\text{-alkyl-}$ 

sulphonyl and  $C_1$ - $C_6$ -alkylthio are optionally substituted by one to three radicals independently of one another selected from the group of hydroxy, cyano, halogen, trifluoromethyl, trifluoromethoxy, hydroxycarbonyl and a group of the formula  $-NR^3R^4$ ,

where

 $R^3$  and  $R^4$  are independently of one another hydrogen or  $C_1$ - $C_6$ -alkyl,

or

R<sup>3</sup> and R<sup>4</sup> together with the nitrogen atom to which they are bonded are 5- to 8-membered heterocyclyl,

R<sup>2</sup> is phenyl or heteroaryl, where phenyl is substituted by 1 to 3 radicals and heteroaryl is optionally substituted by 1 to 3 radicals in each case independently of one another selected from the group of C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-alkoxy, hydroxycarbonyl, cyano, trifluoromethyl, trifluoromethoxy, amino, nitro, hydroxy, C<sub>1</sub>-C<sub>6</sub>-alkylamino, halogen, C<sub>6</sub>-C<sub>10</sub>-arylcarbonylamino, C<sub>1</sub>-C<sub>6</sub>-alkylcarbonylamino, C<sub>1</sub>-C<sub>6</sub>-alkylaminocarbonyl, C<sub>1</sub>-C<sub>6</sub>-alkoxycarbonyl, C<sub>6</sub>-C<sub>10</sub>-arylaminocarbonyl, heteroarylcarbonylamino, C<sub>1</sub>-C<sub>6</sub>-alkylsulphonylamino, C<sub>1</sub>-C<sub>6</sub>-alkylsulphonyl and C<sub>1</sub>-C<sub>6</sub>-alkylthio,

where  $C_1$ - $C_6$ -alkyl,  $C_1$ - $C_6$ -alkoxy,  $C_1$ - $C_6$ -alkylamino,  $C_6$ - $C_{10}$ -arylcarbonylamino,  $C_1$ - $C_6$ -alkylcarbonylamino,  $C_1$ - $C_6$ -alkylaminocarbonyl,  $C_1$ - $C_6$ -alkoxy-carbonyl,  $C_6$ - $C_{10}$ -arylaminocarbonyl, heteroarylaminocarbonyl, heteroarylamino,  $C_1$ - $C_6$ -alkylsulphonylamino,  $C_1$ - $C_6$ -alkylsulphonylamino,  $C_1$ - $C_6$ -alkylthio are optionally substituted by one to three radicals independently of one another selected from the group of hydroxy, cyano, halogen, trifluoromethyl, trifluoromethoxy, hydroxycarbonyl and a group of the formula  $-NR^3R^4$ ,

where

R<sup>3</sup> and R<sup>4</sup> have the meanings indicated above,

or a salt, solvate or solvate of a salt thereof.

# **2.** (Currently Amended) The compound of claim 1, where

is C<sub>1</sub>-C<sub>8</sub>-alkyl, C<sub>2</sub>-C<sub>6</sub>-alkenyl, C<sub>2</sub>-C<sub>6</sub>-alkynyl or C<sub>3</sub>-C<sub>8</sub>-cycloalkyl, which are optionally substituted by up to 3 radicals independently of one another selected from the group of C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-alkoxy, hydroxycarbonyl, cyano, amino, nitro, hydroxy, C<sub>1</sub>-C<sub>6</sub>-alkylamino, halogen, C<sub>6</sub>-C<sub>10</sub>-arylcarbonylamino, C<sub>1</sub>-C<sub>6</sub>-alkylaminocarbonyl, C<sub>1</sub>-C<sub>6</sub>-alkoxycarbonyl, C<sub>6</sub>-C<sub>10</sub>-arylaminocarbonyl, heteroarylaminocarbonyl, heteroarylcarbonylamino, C<sub>1</sub>-C<sub>6</sub>-alkylsulphonylamino, C<sub>1</sub>-C<sub>6</sub>-alkylsulphonyl and C<sub>1</sub>-C<sub>6</sub>-alkylthio,

where  $C_1$ - $C_6$ -alkyl,  $C_1$ - $C_6$ -alkoxy,  $C_1$ - $C_6$ -alkylamino,  $C_6$ - $C_{10}$ -arylcarbonylamino,  $C_1$ - $C_6$ -alkylcarbonylamino,  $C_1$ - $C_6$ -alkylaminocarbonyl,  $C_1$ - $C_6$ -alkoxycarbonyl,  $C_6$ - $C_{10}$ -arylaminocarbonyl, heteroarylaminocarbonyl, heteroarylcarbonylamino,  $C_1$ - $C_6$ -alkylsulphonylamino,  $C_1$ - $C_6$ -alkylsulphonyl and  $C_1$ - $C_6$ -alkylthio are optionally substituted by a radical selected from the group of hydroxy, cyano, halogen, hydroxycarbonyl and a group of the formula  $-NR^3R^4$ ,

where

 $R^3$  and  $R^4$  are independently of one another hydrogen or  $C_1$ - $C_6$ -alkyl,

or

R<sup>3</sup> and R<sup>4</sup> together with the nitrogen atom to which they are bonded are 5- to 8-membered heterocyclyl,

R<sup>2</sup> is phenyl or heteroaryl, where phenyl is substituted by 1 to 3 radicals and

heteroaryl is optionally substituted by 1 to 3 radicals in each case independently of one another selected from the group of  $C_1$ - $C_6$ -alkyl,  $C_1$ - $C_6$ -alkoxy, hydroxycarbonyl, cyano, trifluoromethyl, amino, nitro, hydroxy,  $C_1$ - $C_6$ -alkylamino, halogen,  $C_6$ - $C_{10}$ -arylcarbonylamino,  $C_1$ - $C_6$ -alkylaminocarbonyl,  $C_1$ - $C_6$ -alkoxycarbonyl,  $C_6$ - $C_{10}$ -arylaminocarbonyl, heteroarylcarbonylamino,  $C_1$ - $C_6$ -alkylsulphonyl, heteroarylcarbonylamino,  $C_1$ - $C_6$ -alkylsulphonyl,  $C_1$ - $C_6$ -alkylthio,

where  $C_1$ - $C_6$ -alkyl,  $C_1$ - $C_6$ -alkoxy,  $C_1$ - $C_6$ -alkylamino,  $C_6$ - $C_{10}$ -arylcarbonylamino,  $C_1$ - $C_6$ -alkylcarbonylamino,  $C_1$ - $C_6$ -alkylaminocarbonyl,  $C_1$ - $C_6$ -alkoxy-carbonyl,  $C_6$ - $C_{10}$ -arylaminocarbonyl, heteroarylaminocarbonyl, heteroarylcarbonylamino,  $C_1$ - $C_6$ -alkylsulphonylamino,  $C_1$ - $C_6$ -alkylsulphonyl and  $C_1$ - $C_6$ -alkylthio are optionally substituted by a radical selected from the group of hydroxy, cyano, halogen, hydroxycarbonyl and a group of formula  $-NR^3R^4$ .

where

R<sup>3</sup> and R<sup>4</sup> have the meanings indicated above,

or a salt, solvate or solvate of a salt thereof.

# **3.** (**Currently Amended**) A compound of claim 1, where

R<sup>1</sup> is C<sub>1</sub>-C<sub>5</sub>-alkyl or C<sub>3</sub>-C<sub>6</sub>-cycloalkyl, which are optionally substituted by up to 3 radicals independently of one another selected from the group of C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>1</sub>-C<sub>4</sub>-alkoxy, hydroxycarbonyl, cyano, amino, hydroxy, C<sub>1</sub>-C<sub>4</sub>-alkylamino, trifluoromethyl, fluorine, chlorine, bromine, C<sub>6</sub>-C<sub>10</sub>-arylcarbonylamino, C<sub>1</sub>-C<sub>4</sub>-alkylaminocarbonyl, C<sub>1</sub>-C<sub>4</sub>-alkoxycarbonyl, C<sub>6</sub>-C<sub>10</sub>-arylcarbonylamino, C<sub>1</sub>-C<sub>4</sub>-alkylaminocarbonyl, heteroarylcarbonylamino, C<sub>1</sub>-C<sub>4</sub>-alkylsulphonyl, C<sub>1</sub>-C<sub>4</sub>-alkylthio,

where  $C_1$ - $C_4$ -alkyl and  $C_1$ - $C_4$ -alkoxy are optionally substituted by a radical selected from the group of hydroxy, cyano, fluorine, chlorine, bromine, hydroxycarbonyl and a group of the formula  $-NR^3R^4$ ,

where

 $R^3$  and  $R^4$  are independently hydrogen or  $C_1$ - $C_4$ -alkyl,

or

R<sup>3</sup> and R<sup>4</sup> together with the nitrogen atom to which they are bonded are 5- to 6-membered heterocyclyl,

R<sup>2</sup> is phenyl, pyrimidyl, pyridyl N-oxide or pyridyl, where phenyl is substituted by 1 to 3 radicals and pyrimidyl, pyridyl N-oxide and pyridyl are optionally substituted by 1 to 3 radicals in each case independently of one another selected from the group of C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>1</sub>-C<sub>4</sub>-alkoxy, hydroxycarbonyl, cyano, trifluoromethyl, amino, hydroxy, C<sub>1</sub>-C<sub>4</sub>-alkylamino, fluorine, chlorine, bromine, C<sub>6</sub>-C<sub>10</sub>-arylcarbonylamino, C<sub>1</sub>-C<sub>4</sub>-alkylaminocarbonyl, heteroarylaminocarbonyl, C<sub>6</sub>-C<sub>10</sub>-arylaminocarbonyl, heteroarylaminocarbonyl, heteroarylcarbonylamino, C<sub>1</sub>-C<sub>4</sub>-alkylsulphonylamino, C<sub>1</sub>-C<sub>4</sub>-alkylsulphonyl, and C<sub>1</sub>-C<sub>4</sub>-alkylthio,

where  $C_1$ - $C_4$ -alkyl and  $C_1$ - $C_4$ -alkoxy are optionally substituted by a radical selected from the group of hydroxy, cyano, fluorine, chlorine, bromine, hydroxycarbonyl and a group of the formula  $-NR^3R^4$ ,

where

 $R^3$  and  $R^4$  have the meanings indicated in claim 1,

or a salt, solvate or solvate of a salt thereof.

## **4.** (Currently Amended) A compound of claim 1, where

R<sup>1</sup> has the meanings indicated in claim 1, and

R<sup>2</sup> is phenyl, pyridyl N-oxide or pyridyl, where phenyl is substituted by 1 to 3 radicals and pyridyl and pyridyl N-oxide are optionally substituted by 1 to 3 radicals in each case independently of one another selected from the group of methyl, ethyl, 2-propyl, trifluoromethyl, methoxy, ethoxy, fluorine and chlorine,

or a salt, solvate or solvate of a salt thereof.

## **5.** (Currently Amended) A compound of claim 1, where

- $R^1$  is  $C_1$ - $C_5$ -alkyl or  $C_5$ - $C_6$ -cycloalkyl, which are optionally substituted by up to 3 radicals independently of one another selected from the group of  $C_1$ - $C_4$ -alkyl, trifluoromethyl, fluorine, hydroxy, phenylcarbonylamino,  $C_1$ - $C_4$ -alkylaminocarbonyl or phenylaminocarbonyl, and
- R<sup>2</sup> is phenyl, pyridyl N-oxide or pyridyl, where phenyl is substituted by 1 to 3 radicals and pyridyl and pyridyl N-oxide are optionally substituted by 1 to 3 radicals in each case independently of one another selected from the group of methyl, ethyl, 2-propyl, trifluoromethyl, methoxy, ethoxy, fluorine and chlorine,

or a salt, solvate or solvate of a salt thereof.

### **6.** (Currently Amended) A compound of claim 1, where

 $R^1$  is  $C_1$ - $C_5$ -alkyl or  $C_5$ - $C_6$ -cycloalkyl, which are optionally substituted by up to 3 radicals independently of one another selected from the group of  $C_1$ - $C_4$ -alkyl,

fluorine, trifluoromethyl, hydroxy, phenylcarbonylamino,  $C_1$ - $C_4$ -alkylcarbonylamino,  $C_1$ - $C_4$ -alkylaminocarbonyl or phenylaminocarbonyl, and

R<sup>2</sup> is phenyl, pyridyl N-oxide or pyridyl, where phenyl is substituted by one radical and pyridyl and pyridyl N-oxide are optionally substituted by one radical in each case independently of one another selected from the group of methyl, ethyl, 2-propyl, trifluoromethyl, methoxy, ethoxy, fluorine and chlorine,

or a salt, solvate or solvate of a salt thereof.

- 7. (Withdrawn Currently Amended) A process for preparing a compound according to claim 1, comprising:
  - [A] converting a compound of the formula

$$H_2N$$
 $N$ 
 $H_2N$ 
 $R^2$ 
(II),

in which

 $R^2$  has the meanings indicated in claim 1,

by reaction with a compound of the formula

$$Z$$
 (IIIa),

in which R<sup>1</sup> has the meanings indicated in claim 1,

and

Z is chlorine or bromine,

in an inert solvent and in the presence of a base, initially into a compound of the formula

in which

R<sup>1</sup> and R<sup>2</sup> have the meanings indicated in claim 1,

and then cyclizing in an inert solvent in the presence of a base to a compound of the formula (I),

or

[B] reacting a compound of the formula (II) with a compound of the formula

$$R^{1}$$
  $Q$   $R^{5}$  (IIIb),

in which

R<sup>1</sup> has the meanings indicated in claim 1,

and

R<sup>5</sup> is methyl or ethyl,

in an inert solvent and in the presence of a base, with direct cyclization to a compound of formula (I),

or

# [C] converting a compound of the formula

$$H_2N$$
 $N$ 
 $R^2$ 
 $(V)$ 

in which

R<sup>2</sup> has the meanings indicated in claim 1,

initially by reaction with a compound of the formula (IIIa) in an inert solvent and in the presence of a base into a compound of the formula

in which

R<sup>1</sup> and R<sup>2</sup> have the meanings indicated in claim 1,

and cyclizing the compound for formula (VI) in a second step in an inert solvent and in the presence of a base and of an oxidizing agent to a compound of (I),

and the resulting compounds of the formula (I) are where appropriate reacted with the appropriate (i) solvents and/or (ii) bases or acids to give a salt, solvate or solvate of a salt thereof.

- 8. (Cancelled)
- **9.** (**Previously presented**) A pharmaceutical composition comprising at least one compound of any one of claims 1 to 6 and at least one pharmaceutically acceptable, essentially non-toxic carrier or excipient.
- 10. (Cancelled)
- 11. (Cancelled)
- 12. (Cancelled)
- **13. (Withdrawn)** A method for the treatment of impairments of perception, concentration, learning and/or memory in a human or animal comprising administering an effective amount of a compound of any one of claims 1 to 6 to the human or animal.
- **14.** (Withdrawn) The method according to Claim 13, where the impairment is a consequence of Alzheimer's disease.
- 15. (New) A method for producing a medicament useful for treating an impairment of perception, concentration, learning and/or memory in a human or animal, comprising providing a compound according to claim 1 or a salt thereof in a form useful for treating perception, concentration, learning and/or memory in a human or animal.
- **16.** (New) The method according to Claim 15, where the impairment is a consequence of Alzheimer's disease.
- 17. (New) A pharmaceutical composition comprising a compound according to claim 1 or a salt thereof, as the active moiety.